

D' 62. (New) The method of Claim 56, further comprising forming a cavity in the dielectric layer and wherein depositing the conductive material on the sacrificial layer results in the cavity being filled with the conductive material.

#### REMARKS

In the Office Action mailed March 14, 2002 (Paper No. 9), the Examiner rejected Claims 30-32, 34, and 37 of the pending application as being unpatentable under 35 U.S.C. §103(a) over Han (US Patent Number 6,107,191) in view of Sandhu et al. (US Patent Number 5,069,002). The Examiner further rejected Claims 33, 35, and 36 of the pending application as being unpatentable under 35 U.S.C. §103(a) over Han (US Patent Number 6,107,191) in view of Sandhu et al. (US Patent Number 5,069,002), and further in view of Tobben et al. (US Patent Number 6,103,456).

In the Office Action, the Examiner rejected Claim 30 of the pending application as being unpatentable under 35 U.S.C. §103(a) over Han (US Patent Number 6,107,191) in view of Sandhu et al. (US Patent Number 5,069,002). However, the Applicant notes that the Han reference fails to disclose "*removing the conductive material and the sacrificial layer using a chemical mechanical polishing process*" as the Applicant discloses in Claim 30. The Han reference uses "a planar etch" (column 6, lines 14-16) and "typical plasma oxide etch methods" (column 3, line 28) to etch a layer. Hence, Han cannot be said to teach or suggest using CMP to \* ① remove a conductive layer or positioning a sacrificial layer and a shield layer such that the CMP can remove the conductive layer but can be stopped when the CMP reaches the underlying shield layer. Further, to the extent that Han is removing conductive material, Han only discloses a sacrificial layer 140 and does not disclose or suggest using an additional shield layer to protect ② the underlying substrate in the manner claimed by the Applicant.

Moreover, since Han teaches etching away layers, there would be no motivation to ③ combine this reference with the Sandhu et al. reference which is directed towards CMP. Even if Han and Sandhu could be combined, the combination of these references still fails to teach Claim 30 as originally filed.

Specifically, Sandhu is directed towards removing coatings to form insulating spacers between IC devices (See Col. 5, lines 39 – 41) and is not directed toward removing conductive material deposited on wafers while using shield layers to protect the underlying wafer. Moreover, Sandhu does not disclose positioning both a sacrificial layer and a shield layer between the substrate and the deposited conductive material. Hence, even if both Han and Sandhu were combined, the combination would still fail to teach the concept of positioning a shield layer to protect the underlying substrate from damage during the CMP removal of the conductive material. For these reasons, the Applicant submits that Claim 30, as originally filed is patentable over the art of record.

By this paper, the Applicant has also added Claims 56 – 62 to further define the invention. Claim 56 is patentable over the art of record for the reasons given above. Moreover, the Applicant has included limitations directed selecting an etchant that will be used with the CMP process that removes the sacrificial layer but does not remove the shield layer. In this way, removal of the sacrificial layer can be performed more efficiently while reducing the risk that the shield layer will be unduly thinned in places by the CMP process. For these reasons the Applicant submits that Claim 56 is patentable over the art of record.

#### SUMMARY

For the foregoing reasons, the Applicant believes that the present application is in condition for allowance, and the Applicant requests the prompt allowance of the same. The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the application in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call the undersigned at the number shown below.

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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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